IN THE CLAIMS:

1. (currently amended) An apparatus for controlling fixed-length transmission unit traffic in a switch platform, the apparatus comprising at least one bi-directional first-in-first-out (FIFO) unit, wherein each bi-directional FIFO unit comprises a first and a second unidirectional FIFO buffer, wherein the first and second uni-directional FIFO buffers each comprise a bits per word programmable parameter and a words per cell programmable parameter, wherein the fixed length of the transmission units that the fixed length transmission unit traffic is comprised of can be determined from said bits per word parameter and said words per cell parameter[that together correspond to the fixed length of the transmission units that the fixed length transmission unit traffic is comprised of].

2. (previously amended) The apparatus of claim 1, wherein the first and second unidirectional FIFO buffers each comprise asynchronous read and write ports.

3. (previously cancelled)

4. (currently amended) The apparatus of claim 1[,] wherein the at least one bi-directional FIFO unit is: [coupled]1) configured to implement a write of at least one fixed-length transmission unit sent from an interface; and is 2) configured to implement a read of at least one fixed-length transmission unit destined to at least one asynchronous transfer mode (ATM)] interface[, at least one frame relay interface, at least one, voice interface, and at least one data interface].

5. (currently amended) The apparatus of claim 1 wherein the first unidirectional FIFO buffer is [coupled]configured to implement a write of at least one fixed-length transmission unit sent from an ATM interface.

6. (currently amended) The apparatus of claim 1[,] wherein the first unidirectional FIFO buffer is [coupled]configured to implement a write of at least one fixed-length transmission unit sent from a frame relay interface.

7. (currently amended) The apparatus of claim 1[,] wherein the first unidirectional FIFO buffer is [coupled]configured to implement a write of at least one fixed-length transmission unit sent from a voice interface.

8. (currently amended) The apparatus of claim 1[,] wherein the first unidirectional FIFO buffer is [coupled]configured to implement a write of at least one fixed-length transmission unit sent from a data [surface]interface.

9. (currently amended) The apparatus of claim 1[,] wherein the first unidirectional FIFO buffer is [coupled]configured to implement a read of at least one fixed-length transmission unit destined to at least one switch, wherein the at least one switch handles fixed-length transmission units from sources having a plurality of bandwidths.

10. (currently amended) The apparatus of claim 9[,] wherein the at least one switch [is coupled to]can route the at least one fixed-length transmission unit [to an OC12 trunk line and] to at least one service module.

11. (currently amended) The apparatus of claim 10 wherein the at least one service module is [coupled to]can provide the at least one fixed-length transmission unit to [at least one]a service subscriber using a T1, E1, T3, E3, OC3, [and]or OC 12 port[s].

12. (currently amended) The apparatus of claim 1[,] wherein the second unidirectional FIFO buffer is [coupled]configured to implement a read of at least one fixed-length transmission unit destined to an ATM interface.

13. (currently amended) The apparatus of claim 1[,] wherein the second unidirectional FIFO buffer is [coupled]configured to implement a read of at least one fixed-length transmission unit destined to a frame relay interface.

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14. (currently amended) The apparatus of claim 1[,] wherein the second unidirectional FIFO buffer is [coupled]configured to implement a read of at least one fixed-length transmission unit destined to a voice interface.

15. (currently amended) The apparatus of claim 1[,] wherein the second unidirectional FIFO buffer is [coupled]configured to implement a read of at least one fixed-length transmission unit destined to a data interface.

16. (currently amended) The apparatus of claim 1[,] wherein the second unidirectional FIFO buffer is [coupled]configured to implement a write of at least one fixed-length transmission unit sent from at least one switch wherein the at least one switch handles fixed-length transmission units from sources having a plurality of bandwidths.

17. (currently amended) The apparatus of claim 16[,] wherein the at least one switch [is coupled to]can route the at least one fixed-length transmission unit from [an OC12 trunk line and from at least one] a service module.

18. (currently amended) The apparatus of claim 17[,] wherein the [at least one] service module [is coupled to provide]can receive the at least one fixed-length transmission unit [to]from a [at least one] service subscriber using a T1,El, T3, E3, OC3, [and]or OC 12 port[s].

19. (currently amended) The apparatus of claim 1[,] wherein the at least one bi-directional FIFO unit comprises a diagnostic interface, wherein the diagnostic interface supports a non destructive read of the at least one bi-directional FIFO unit while at least one fixed-length transmission unit is being written to an read from the at least one bi-directional FIFO unit.

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20. (currently amended) The apparatus of claim 1[,] wherein the at least one fixed-length transmission unit is written to the second unidirectional FIFO buffer from the first unidirectional FIFO buffer over a first enabled diagnostic loop.

21. (currently amended) The apparatus of claim 1[,] wherein the at least one fixed-length transmission unit is written to the first unidirectional FIFO buffer from the second unidirectional FIFO buffer over a second enabled diagnostic loop.

22. (currently amended) The apparatus of claim 1[,] wherein each unidirectional FIFO buffer outputs a write port fixed-length transmission unit count, wherein a write

port of each unidirectional FIFO buffer outputs a status indicating space available in the unidirectional FIFO buffer for at least one more fixed-length transmission unit.

23. (currently amended) The apparatus of claim 22[,] wherein at least one master bi-directional FIFO unit ceases reading at least one fixed-length transmission unit to the first unidirectional FIFO buffer of at least one slave bi-directional FIFO unit in response to the write port fixed-length transmission unit count of the first unidirectional FIFO buffer, wherein the at least one master bi-directional FIFO unit disables at least one switch from routing at least one fixed-length transmission unit to the at least one slave bi-directional FIFO unit in response to the write port fixed-length transmission unit count, and wherein [the] at least one switch routes the at least one fixed-length transmission unit to another of the at least one slave bi-directional FIFO units in response to the write port fixed-length transmission unit count of the first unidirectional FIFO buffer.

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24. (currently amended) The apparatus of claim 23[,] wherein the at least one master bi-directional FIFO unit [resumes reading the at least one fixed-length transmission unit to the second unidirectional FIFO unit] resumes reading the at least one fixed-length transmission unit to the second unidirectional FIFO buffer of the at least one slaved bi-directional FIFO unit in response to the write port fixed-length transmission unit count of the second unidirectional FIFO buffer, wherein the at least one master bi-directional FIFO unit enables at least one switch to route at least one fixed-length transmission unit to the at least one slave bi-directional FIFO unit in response to the write port fixed-length transmission unit count of the second

unidirectional FIFO buffer.

25. (currently amended) The apparatus of claim 1[,] wherein each unidirectional FIFO buffer outputs a read port fixed-length transmission unit count, wherein a read
port of each unidirectional FIFO buffer outputs a status indicating space available in
the unidirectional FIFO buffer for at least one transmission unit.

26. (currently amended) The apparatus of claim [2,] 1 wherein [the] write port logic of each unidirectional FIFO buffer is synchronous with [the]a write clock.

27. (currently amended) The apparatus of claim 26[,] wherein the write clock operates at a
frequency substantially equal to 50 megahertz.

28. (currently amended) The apparatus of claim [26,]1 wherein [the] read port logic of each unidirectional FIFO buffer is synchronous with a read clock.

29. (currently amended) The apparatus of claim 28[,] wherein the read clock operates at
frequency substantially equal to 21 megahertz.

30. (currently amended) The apparatus of claim 28[,] wherein the read clock operates at a frequency substantially equal to 42 megahertz.

31. (original) The apparatus of claim 1 wherein at least one invalid fixed-length transmission unit can be discarded from each unidirectional FIFO buffer.

32. (currently amended) The apparatus of claim 1[,] wherein the switch platform further comprises two switches.

33. (currently amended) The apparatus of claim 1[,] wherein the switch platform comprises at least one service module and at least one fixed-length transmission unit bus controller, wherein the at least one fixed-length transmission unit bus controller is coupled [among]between the at least one service module and a least one switch, wherein the at least one service module comprises at least one slave bi-directional FIFO unit, and wherein the at least one fixed-length transmission unit bus controller comprises at least one master bi-directional FIFO unit.

34. (currently amended) A network switch platform comprising:

at least one service module;

at least one fixed length transmission unit bus controller coupled between the at least one service module and at least one switch;

at least one bi-directional first-in-first-out (FIFO) unit located in the at least one fixed-length transmission unit bus controller, wherein each bi-directional FIFO unit comprises a first and a second unidirectional FIFO buffer each capable of discarding an invalid fixed length transmission unit, wherein the first and second uni-directional FIFO buffers each comprise a bits per word programmable parameter and a words per cell programmable parameter, wherein a fixed length of the transmission units that a fixed length transmission unit flow is comprised of can be determined from the bits per word

parameter and the words per cell parameter[that together correspond to a fixed length of the transmission units that a fixed length transmission unit flow is comprised of]; and

at least one diagnostic interface, wherein the at least one diagnostic interface supports a non-destructive read of the at least one bi-directional FIFO unit while at least one fixed-length transmission unit is being written to and read from the at least one bi-directional FIFO unit.

35. (currently amended) The network switch platform of claim 34[,] wherein the at least one bi-directional FIFO unit is [coupled]configured to write at least one fixed-length transmission unit from and read at least one fixed-length transmission unit to [at least one] an interface, wherein the interface is an asynchronous transfer mode (ATM) interface, [at least one]a frame relay interface, [at least one]a voice interface[, and at least one]or a data interface.

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36. (currently amended) The network switch platform of claim 34[,] wherein the at least one fixed-length transmission unit is written to the second unidirectional FIFO buffer from the first unidirectional FIFO buffer over a first enabled diagnostic loop, wherein at least one fixed-length transmission unit is written to the first unidirectional FIFO buffer from the second unidirectional FIFO buffer over a second enabled diagnostic loop.

37. (amended) The network switch platform of claim 34[,] wherein each unidirectional FIFO buffer outputs a write port fixed-length transmission unit count, wherein a write port of each unidirectional FIFO buffer outputs a status indication space available in the unidirectional FIFO buffer for at least one more fixed-length transmission unit, wherein each unidirectional FIFO

buffer outputs a read port fixed-length transmission unit count, wherein a read port of each unidirectional FIFO buffer outputs a status indicating space available in the unidirectional FIFO buffer for at least one more fixed-length transmission unit.

38. (currently amended) The network switch platform of claim 34[,] wherein the first and second unidirectional FIFO buffers each comprise asynchronous read and write ports, wherein the write port logic of each unidirectional FIFO buffer is synchronous with a write clock, and wherein the read port logic of each unidirectional FIFO buffer is synchronous with a read clock.

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39. (previously cancelled)

40. (currently amended) The network switch platform of claim 34[,] wherein the at least on bi-directional FIFO unit is [coupled]configured to read at least one fixed-length transmission unit to and write at least one fixed-length transmission unit from the at least one switch, wherein the switch handles fixed-length transmission units from sources having a plurality of bandwidths.

41. (currently amended) The network switch platform of claim 34[,] wherein the at least one service module [is coupled to]can receive at least one fixed-length transmission unit from and provide at least one fixed-length transmission unit to at least one service subscriber using any one of a TI, EI, T3, E3, OC3, [and]or OC 12 port[s].

42. (currently amended) A method for controlling fixed-length transmission unit traffic in a switch platform, the method comprising the step of transferring at least one

fixed-length transmission unit among a plurality of ports having a plurality of bandwidths using a bi-directional first-in-first-out (FIFO) unit, wherein the bi-directional FIFO unit comprises a first and second unidirectional FIFO buffer, wherein the first and second uni-directional FIFO buffers each comprise a bits per word programmable parameter and a words per cell programmable parameter, wherein the fixed-length of the transmission units that the fixed length transmission unit traffic is comprised of can be determined from the bits per word parameter and the words per cell parameter[that together correspond to the fixed-length of the transmission units that the fixed length transmission unit traffic is comprised of].

43. (currently amended) The method of claim 42[,] further comprising the step of programming the word size of each of the first and second unidirectional FIFO buffers.

44. (currently amended) The method of claim 43[,] wherein the step of transferring comprises the steps of:

synchronously writing the at least one fixed-length transmission unit from at least one port to the first unidirectional FIFO buffer; and

synchronously reading the at least one fixed-length transmission unit from the first unidirectional FIFO buffer to at least one switch, wherein the reading is asynchronous with the writing.

45. (currently amended) The method of claim 42[,] wherein the step of transferring comprises the steps of:

synchronously writing the at least one fixed-length transmission unit from at least one switch to the second unidirectional FIFO buffer; and

synchronously reading the at least one fixed-length transmission

unit from the second unidirectional FIFO buffer to the at least one port, wherein the reading is asynchronous with the writing.

46. (currently amended) The method of claim 42[,] further comprising steps of:

discarding at least one invalid fixed-length transmission unit from each unidirectional FIFO buffer; and

executing a non-destructive read of the at least one bi-directional FIFO unit while at least one fixed-length transmission unit is being written to and read from the at least one bi-directional FIFO.

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47. (currently amended) The method of claim 42[,] further comprising the steps of:

writing at least one fixed-length transmission unit to the second unidirectional FIFO buffer from the first unidirectional FIFO buffer using a first enabled diagnostic loop; and

writing at least one fixed-length transmission unit to the first unidirectional FIFO buffer from the second unidirectional FIFO buffer over a diagnostic loop.

48. (currently amended) The method of claim 42[,] further comprising steps of:

outputting a write port fixed-length transmission unit count from each unidirectional FIFO buffer;

outputting a read port fixed-length transmission unit count form each unidirectional FIFO buffer; and

outputting from a read port of each unidirectional FIFO buffer a status

indicating space available in the unidirectional FIFO buffer for at least one more fixed-length transmission unit.

49. (currently amended) The method of claim 42[,] wherein the plurality of ports comprise at least one asynchronous transfer mode (ATM) interface, at least one frame
relay interface, at least one voice interface, at least one data interface, at least one network switch interface, at least one OC12 interface, and at least one OC3 interface.

50. (currently amended) An apparatus, comprising:

a bus master that controls:

1) a first bus that transports information from said bus master to one or more service modules that are coupled to said first bus;

2) a second bus that transports information from said one or more service modules to said bus master, said one or more service modules also coupled to said second bus, each of said service modules providing a networking interface,

said bus master further comprising:

a) a transmission output to said first bus that transmits egress information in fixed size portions to any of said service modules;

b) a reception input from said second bus that receives ingress information in fixed size portions from any of said service modules;

c) an egress first-in-first-out (FIFO) buffer that enqueues words from which said fixed size portions of egress information are comprised, said egress FIFO buffer further comprising:

1) an output from which said fixed size portions of egress information flow to said transmission output;

2) an input at which said fixed size portions of egress information are received, each of said fixed size portions of egress information including, when received at said input, a label that identifies which of said service modules a particular fixed size portion of egress information is to be sent to;

3) a programmable bits per word size;

4) a programmable words per egress cell size, wherein, said fixed size of said portions of egress information can be determined from said bits per word size and said words per egress cell size[together correspond to said fixed size of said portions of egress information]; and

d) an ingress first-in-first-out (FIFO) buffer that enqueues words from which said fixed size portions of ingress information are comprised, said ingress FIFO buffer further comprising:

1) an output from which said fixed size portions of ingress information flow;

2) an input to which said fixed size portions of ingress information flow from said reception input, each of said fixed size portions of ingress information including, when received at said reception input, a label that identifies which of said service modules a particular fixed size portion of ingress information is being sent from;

3) a programmable bits per word size;

4) a programmable words per ingress cell size, wherein said fixed size of said portions of egress information can be determined from said bits per word size and said words per ingress cell size[together correspond to said fixed size of said portions of egress information].

51. (previously added) The apparatus of claim 50 wherein one of said service modules can be used to provide Frame Relay service.

52. (previously added) The apparatus of claim 51 wherein said one of said service modules has a T1 networking interface.

53. (previously added) The apparatus of claim 50 wherein one of said service modules can be used to provide ATM service.

54. (previously added) The apparatus of claim 53 wherein said one of said service modules has a T1 networking interface.

55. (previously added) The apparatus of claim 50 wherein said fixed size of said portions of egress information is the same as said fixed size of said portions of ingress information.

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56. (previously added) The apparatus of claim 55 wherein said fixed size further comprises 56 bytes.

57. (previously added)The apparatus of claim 50 wherein said egress FIFO buffer further comprises a first counter that counts the number of words that have been stored into said egress FIFO buffer at said egress FIFO buffer input.

58. (previously added) The apparatus of claim 57 wherein said egress FIFO buffer further comprises a first reset value to which said first counter is set if said first counter reaches said word per egress cell size.

59. (previously added) The apparatus of claim 57 wherein said egress FIFO buffer further comprises a second counter that counts the number of words

that have been removed from said egress FIFO buffer at said egress FIFO buffer output.

60. (previously added) The apparatus of claim 59 wherein said egress FIFO buffer further comprises a second reset value to which said second counter is set if said second counter reaches said word per egress cell size.

61. (previously added) The apparatus of claim 59 wherein said egress FIFO buffer further comprises a third counter and a fourth counter that each:

1) increment in value if said first counter reaches said word per egress cell size; and

2) decrement in value if said second counter reaches said word per egress cell size.

62. (previously added) The apparatus of claim 61 wherein said third counter is within the domain of a first clock that times the removal of words from said egress FIFO buffer and wherein said fourth counter is within the domain of a second clock that times the storing of words into said egress FIFO buffer.

63. (previously added) The apparatus of claim 50 wherein said ingress FIFO buffer further comprises a first counter that counts the number of words that have been stored into said ingress FIFO buffer at said ingress FIFO buffer input.

64. (previously added) The apparatus of claim 63 wherein said ingress FIFO buffer further comprises a first reset value to which said first counter is set if said first counter reaches said word per ingress cell size.

65. (previously added) The apparatus of claim 63 wherein said ingress FIFO buffer further comprises a second counter that counts the number of words that have been removed from said ingress FIFO buffer at said ingress FIFO buffer output.

66. (previously added) The apparatus of claim 65 wherein said ingress FIFO buffer further comprises a second reset value to which said second counter is set if said second counter reaches said word per ingress cell size.

67. (previously added) The apparatus of claim 65 wherein said ingress FIFO buffer further comprises a third counter and a fourth counter that each:

1) increment in value if said first counter reaches said word per ingress cell size; and

2) decrement in value if said second counter reaches said word per ingress cell size.

68. (previously added) The apparatus of claim 67 wherein said third counter is within the domain of a first clock that times the storing of words into said ingress FIFO buffer and wherein said fourth counter is within the domain of a second clock that times the removal of words from said ingress FIFO buffer.

69. (currently amended) A method, comprising:

programming a bits per word size parameter for an egress first-in-first-out (FIFO) buffer and programming a words per egress cell size parameter for said egress FIFO buffer;

programming a bits per word size parameter for an ingress first-in-first-out (FIFO) buffer and programming a words per ingress cell size parameter for said ingress FIFO buffer;

sending fixed size portions of egress information from said egress FIFO buffer over a first bus to any of a plurality of service modules that are coupled to said first bus, wherein said fixed size of said portions of egress data can be determined from said egress FIFO's programmed bits per word size parameter and words per egress cell size parameter[together corresponding to said fixed size of said portions of egress data], each of said fixed size portions of egress information further comprising a label that identifies which service module a particular fixed size portion of egress information is sent to; and

sending fixed size portions of ingress information from any of said plurality of service modules over a second bus to said ingress FIFO buffer, wherein said fixed size of said portions of ingress data can be determined from said ingress FIFO's programmed bits per word size parameter and words per [e]ingress cell size parameter [together corresponding to said fixed size of said portions of ingress data], each of said fixed size portions of ingress information further comprising a label that identifies from which service module a particular fixed size portion of ingress information was sent.

70. (previously added) The method of claim 69 wherein said fixed size of said portions of egress information is the same as said fixed size of said portions of ingress information.

71. (previously added) The method of claim 70 wherein said fixed size further comprises 56 bytes.

72. (previously added) The method of claim 69 further comprising counting, with a first count value, the number of words that have been stored into said egress FIFO buffer.

73. (previously added) The method of claim 72 further comprising resetting said first count value to a first reset value if said first count value reaches said word per egress cell size.

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74. (previously added) The method of claim 72 further comprising counting, with a second count value, the number of words that have been removed from said egress FIFO buffer.

75. (previously added) The method of claim 74 further comprising resetting said second count value to a second reset value if said second count value reaches said word per egress cell size.

76. (previously added) The method of claim 74 further comprising counting with a third count value and counting with a fourth count value, said counting with a third and fourth count values further comprising:

1) incrementing said third and fourth count values if said first count value reaches said word per egress cell size; and

2) decrementing said third and fourth count values if said second count value reaches said word per egress cell size.

77. (previously added) The method of claim 76 wherein said counting with a third count value is timed with a first clock that times the removal of words from said egress FIFO buffer and wherein said counting with a fourth count value is timed with a second clock that times the storing of words into said egress FIFO buffer.

78. (previously added) The method of claim 69 further comprising counting, with a first count value, the number of words that have been stored into said ingress FIFO buffer.

79. (previously added) The method of claim 78 further comprising resetting said first count value to a first reset value if said first count value reaches said word per ingress cell size.

80. (previously added) The method of claim 78 further comprising counting, with a second count value, the number of words that have been removed from said ingress FIFO buffer.

81. (previously added) The method of claim 80 further comprising resetting said second count value to a second reset value if said second count value reaches said word per ingress cell size.

82. (previously added) The method of claim 80 further comprising counting with a third count value and counting with a fourth count value, said counting with a third and fourth count values further comprising:

1) incrementing said third and fourth count values if said first count value reaches said word per ingress cell size; and

2) decrementing said third and fourth count values if said second count values reaches said word per ingress cell size.

83. (previously added) The method of claim 82 wherein said counting with a third count value is timed with a first clock that times the storing of words into said ingress FIFO buffer and wherein said counting with a fourth count value is timed with a second clock that times the removal of words from said ingress FIFO buffer.

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84. (currently amended) An apparatus, comprising:

means for programming a bits per word size parameter for an egress first-in-first-out (FIFO) buffer and programming a words per egress cell size parameter for said egress FIFO buffer;

means for programming a bits per word size parameter for an ingress first-in-first-out (FIFO) buffer and programming a words per ingress cell size parameter for said ingress FIFO buffer;

means for sending fixed size portions of egress information from said egress FIFO buffer over a first bus to any of a plurality of service modules that are coupled to said first bus, wherein said fixed size of said portions of egress data can be determined from said egress FIFO's programmed bits per word size parameter and words per egress cell size parameter[together corresponding to said fixed size of said portions of egress data], each of said fixed size portions of egress information further comprising a label that identifies which service module a particular fixed size portion of egress information is sent to; and

means for sending fixed size portions of ingress information from any of said plurality of service modules over a second bus to said ingress FIFO buffer, wherein said fixed size of said portions of ingress data can be determined from said ingress FIFO's programmed bits per word size parameter and words per egress cell size parameter [together corresponding to said fixed size of said portions of ingress data], each of said fixed size portions of ingress information further comprising a label that identifies from which service module a particular fixed size portion of ingress information was sent.

85. (previously added) The apparatus of claim 84 wherein said fixed size of said portions of egress information is the same as said fixed size of said portions of ingress information.

86. (previously added) The apparatus of claim 85 wherein said fixed size further comprises 56 bytes.

87. (previously added) The apparatus of claim 84 further comprising means for counting, with a first count value, the number of words that have been stored into said egress FIFO buffer.

88. (previously added) The apparatus of claim 87 further comprising means for resetting said first count value to a first reset value if said first count value reaches said word per egress cell size.

89. (previously added) The apparatus of claim 87 further comprising means for counting, with a second count value, the number of words that have been removed from said egress FIFO buffer.

90. (previously added) The apparatus of claim 89 further comprising means for resetting said second count value to a second reset value if said second count value reaches said word per egress cell size.

91. (previously added) The apparatus of claim 89 further comprising means for counting with a third count value and counting with a fourth count value, said counting with a third and fourth count values further comprising:

1) incrementing said third and fourth count values if said first count value reaches said word per egress cell size; and

2) decrementing said third and fourth count values if said second count value reaches said word per egress cell size.

92. (previously added) The apparatus of claim 91 wherein said counting with a third count value is timed with a first clock that times the removal of words from said egress FIFO buffer and wherein said counting with a fourth count value is timed with a second clock that times the storing of words into said egress FIFO buffer.

93. (previously added) The apparatus of claim 84 further comprising means for counting, with a first count value, the number of words that have been stored into said ingress FIFO buffer.

94. (previously added) The apparatus of claim 93 further comprising means for resetting said first count value to a first reset value if said first count value reaches said word per ingress cell size.

95. (previously added) The apparatus of claim 93 further comprising means for counting, with a second count value, the number of words that have been removed from said ingress FIFO buffer.

96. (previously added) The apparatus of claim 95 further comprising means for resetting said second count value to a second reset value if said second count value reaches said word per ingress cell size.

97. (previously added) The apparatus of claim 95 further comprising means for counting with a third count value and counting with a fourth count value, said counting with a third and fourth count values further comprising:

1) incrementing said third and fourth count values if said first count value reaches said word per ingress cell size; and

2) decrementing said third and fourth count values if said second count values reaches said word per ingress cell size.

98. (previously added) The apparatus of claim 97 wherein said counting with a third count value is timed with a first clock that times the storing of words into said ingress FIFO buffer and wherein said counting with a fourth count value is timed with a second clock that times the removal of words from said ingress FIFO buffer.